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ABSTRACT

Operation Wordpower is a reading program reaching disadvantaged adults and operating in Chicago's urban community areas. The program accepts any person who is reading below the fifth grade level. Instruction is by means of the Sullivan reading materials adapted to the Edison Responsive Environment teaching technology (called "Talking Typewriter") until the students' reading ability improves to the sixth grade level. At this point the students graduate from the program, often moving on to other educational programs. This report is an evaluation of Operation Wordpower, utilizing information already available in the files of each of the four Center sites for a total of 372 students. Two questionnaires, one to determine student opinion and attitudes toward the program and the other to validate student attitudes by using staff responses, were respectively administered to students and staff. These data were used to review student characteristics and attitudes, to determine why students drop out, and to evaluate program effectiveness. Findings indicate that the program is effecting an important function in the area of reading improvement, but that it must be made more cost effective by moving to more locations and by instituting a more effective recruitment and motivational program. (RJ)

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INITIAL EVALUATION OF OPERATION WORDPOWER

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May 15, 1970

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INTRODUCTION

This document is an initial report created by Instructional Dynamics Incorporated to evaluate the progress of the Operation Wordpower program operated by the Chicago Committee on Urban Opportunity. The report is organized in the following way:

- Chapter 1 discusses the general organization of the Wordpower program.
- Chapter 2 explains the methods used in this evaluation.
- Chapter 3 reviews the personal characteristics of the Wordpower students.
- Chapter 4 analyzes the attitudes of the Wordpower students toward their program.
- Chapter 5 discusses why students drop out.
- Chapter 6 evaluates the effectiveness of Wordpower.
- Chapter 7 offers a brief summary of the conclusions given in this report.

Special thanks are due the students and staff of Wordpower, and Mr. Louis Scott, the Program Director, for assisting us in all our efforts.

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CHAPTER 1

WORDPOWER: A BRIEF DESCRIPTION

Operation Wordpower is a reading program reaching disadvantaged adults. The program, supported by both federal and local monies administered by the Chicago Committee on Urban Opportunity, operates in the Montrose Center on Chicago's north side, the King Center on Chicago's south side, and the Garfield and Lawndale Centers on Chicago's west side.

Wordpower uses the Edison Responsive Environment teaching technology, nicknamed the "Talking Typewriter", to administer the Wordpower reading program to students. The Talking Typewriter coordinates a slide projector, a memory drum, a tape recorder and playback unit into a complete multimedia reading package. All the ingredients are combined with responding typewriter in a single soundproof booth-carrel.

Since the program is self-instructional, it is staffed effectively by non-professionals trained to operate the booth equipment. To staff the program, Wordpower employs one program assistant per two booths per shift, one supervisor per shift per Center, and one study area specialist per Center. Their duties include handling the paper work, interviewing new enrollees and assisting students in the study area monitoring the machines. None are professional reading teachers.

Wordpower uses the Sullivan reading materials adapted to the Talking Typewriter format. These materials were originally created for children and therefore have not completely satisfied the needs of the adult Wordpower students. To remedy this deficiency in the program, materials more suitable to adult interests are being added to the program.

In addition to the Talking Typewriter, Wordpower also provides a study area in which the students can read other materials, practice their writing, and review the work that they have completed with the Talking Typewriter. The student spends approximately twenty minutes in the Talking Typewriter booth, and twenty minutes in the study area each day.

The flexibility of the Talking Typewriter format allows Wordpower students to schedule booth sessions at a time each day convenient to the student.

Students do not receive any financial support, carfare, or babysitting expenses, but Wordpower does provide a nursery for the care of pre-school children whose parents are enrolled in the program.

Students who enter the program are asked to take the Stanford Achievement and Sullivan Reading tests. The program accepts any person 16 years or older who is reading below the fifth grade level.

After approximately twenty hours of machine experience, the reading test is given again and the student's progress is recorded. When the student reaches the sixth grade level, he graduates from Wordpower.

In summary, Wordpower is a reading program for the disadvantaged, operating in four urban progress centers in Chicago. The program accepts any student who is reading below the fifth grade level. The student is taught by the Sullivan materials as programmed for the Talking Typewriter until his reading ability improves to the sixth grade level. At this point he graduates from the program, often moving on to other educational programs.

The Chicago Committee on Urban Opportunity, with the approval of the Adult Basic Education Division of the United States Office of Education, contracted with Instructional Dynamics Incorporated to carry out the evaluation of the Wordpower project. Instructional Dynamics Incorporated (IDI) is a Chicago-based firm with extensive experience in training and education programs for disadvantaged adults.

IDI appointed Mr. Fred Forster as Director for the evaluation, and this report has been prepared under his direction.

IDI will issue a second more extensive report at the conclusion of the current Federal contract with Wordpower in the Fall of 1970.

CHAPTER 2

METHOD USED FOR THE EVALUATION

To evaluate the Wordpower program, Instructional Dynamics Incorporated organized a staff of twenty interviewers to collect information on a systematic basis in various ways. In undertaking this task, we were asked to refrain from badgering students with questionnaires and inventories, and consequently we have relied heavily upon that information already available in Wordpower files at each of the four Center sites. This information was carefully examined, organized and computer processed but a major problem was the lack of uniformity we encountered both in the forms and information available for each student, and information missing from many files. This was understandable, however, since the files had not been originally intended to create a data bank for our evaluation.

In spite of this difficulty, we were able to secure information for a total of 372 Wordpower students. This data is summarized in Chapter 3, "Characteristics of the Wordpower Student", and in Appendix I, "Data From the Wordpower Files."

In addition to the Wordpower files, we constructed a comprehensive questionnaire used to determine students' opinions and attitudes toward the Wordpower program. The data available from the responses of 213 students is summarized in Appendix III and forms the basis for Chapter 4, "Students Attitudes Toward Wordpower."

A second questionnaire was developed and administered to 33 members of the Wordpower staff. The purpose of this questionnaire was to validate data for student characteristics and attitudes, and to give added insight into problems encountered in the Wordpower program. The responses to the staff questionnaire are summarized in Appendix II.

One of the substantive problems considered in the evaluation is the problem of student dropouts. Since progress in any reading program depends on a systematic continuing educational effort, drop out rate is an important issue to Wordpower. Information from the data bank was brough to bear on this problem and is included in Chapter 5, "Why Students Drop Out".

Another substantive problem of Wordpower regards its effectiveness as a reading program. This problem was viewed from several perspectives, and the information and the results of our investigation are included in Chapter 6.

No evaluation is complete unless it goes beyond the statistics to analyze non-quantitative aspects of the program. In Chapter 7, we discuss current developments and contributions of Wordpower to the teaching of disadvantaged adults, and several case histories of people who have been directly helped by the Wordpower program.

Currently, our evaluation efforts are extending into another area, writing ability. Although that data is not available for this preliminary report, it will be included as pre- and post-test data in the final, comprehensive Wordpower evaluation.

In summary, information from the Wordpower files was gathered by IDI staff and combined with the results of two questionnaires developed and administered by our staff to define the characteristics of the individual reached by the Wordpower program, to outline the attitudes of students toward Wordpower, to determine why students drop out of the Wordpower program, and to evaluate the effectiveness of Wordpower as a reading program.

CHAPTER 3

CHARACTERISTICS OF THE WORDPOWER STUDENTS

The complete analysis for data presented in this chapter is included in the report as Appendix I. The results used for this chapter are based on 372 Wordpower students whose files were analyzed in the Fall of 1969. This sample represents approximately 239 people who were working in the program or who had graduated, 51 people who were currently enrolled in the program but could not be located during the month spent collecting data at the Centers, and 80 people who had dropped from the program after working less than two months.

The differences among these three groups is analyzed in Chapter 5, "Why Students Drop Out".

In Appendix I, it should be noted that the statistics are presented for both the total sample of 372 and separately for the sub-sample of 213 students who we interviewed. Since in almost every case the statistics agree between the total sample and the sample interviewed, we will only comment on those instances where there is a disparity between the two samples.

As can be seen from Appendix I, the Wordpower students are predominantly female (74.7 per cent) and have a mean age of 31.18. A total of 44 per cent of the Wordpower students sampled were unmarried, 39.8 per cent married, and a total of 16 per cent either widowed or divorced.

Over half, 50.7 per cent, of the students indicated they were the heads of their household and a majority, 51.5 per cent, were the primary wage earner in their family whose median size was 4.

Fewer than 4.2 per cent of the Wordpower students had any physical handicap and only 1.8 per cent had any physiological speech impediment although 32.5 per cent of the students were Spanish-speaking and 7.7 per cent were severely retarded because of a poor educational background.

Of the total sample, 62 per cent of those enrolled in the program were classified as urban negro having lived in a large urban center for more than ten years, 11 per cent as rural Negro, and 26.5 per cent as Spanish-speaking. The majority of the Spanish-speaking students had recently migrated into the continental United States from Mexico, Cuba and Puerto Rico.

A substantial majority, 70.8 per cent, of the students were not receiving any type of public assistance, 57.8 per cent of the Wordpower students were unemployed (largely housewives), while 37.8 per cent were employed in some capacity.

Although our study indicated that only 3.1 per cent were classified as underemployed, information available from other reliable sources leads one to suspect that many of the people classified as employed would have been better classified as underemployed.

An analysis of the reasons they were unemployed revealed that 15.9 per cent of the people in the Wordpower program were still in school. 39.3 per cent had family responsibilities that required them to stay full time at home, and 11.2 per cent felt they lacked the skills to find any kind of adequate employment. Other reasons for unemployment included health disability, pregnancy, and age.

In analyzing the salary which Wordpower students had received on their last job, the average was approximately $1.84 per hour with the mean length of employment of 36.3 weeks.

A total of 39.9 per cent of the students had been steadily employed for less than one year of their lives, 14.4 per cent between one and two years, 21.7 per cent between three and nine years, and 23.7 per cent ten years and over. The jobs held by Wordpower students were factory work (31.4 per cent), food and service trades (12.4 per cent) followed by Neighborhood Youth Corps, sales, office-clerical, mechanical, building trades and managerial work.

Their mean income per hour on their present job was $2.21 and their average total self reported mean personal income for the year was $3,568. This may have been an optomistic figure. Their occupational goals indicated that 20.3 per cent were undecided, 18.9 per cent sought some type of professional work, 18.4 per cent sought clerical or other office duties, with the rest choosing mechanical and factory work, the human service field, technical managerial jobs, or the food trades.

In general, it appeared that the Wordpower students viewed themselves as underemployed and were anxious to move from blue collar to white collar jobs.

Wordpower students are predominantly renters: 18.2 per cent rent from the Chicago Housing Authority, 77.2 per cent rent from a private owner, and only 4.6 per cent own their own home. The median number of rooms in their residence is 4.

Although only 20.6 per cent of the students have lived in Chicago for less than one year, the group is highly transient. A total of 18.5 per cent have made two or more changes in address in the past two years and 26.9 per cent have made only one change in the past two years.

The median self reported grade attained in school was eighth grade attained at a mean age of 17, but 94 students in the total sample of 372 and 59 of the 213 students interviewed had not reached eighth grade.

The area of the country where they had attended school indicated that 33.2 per cent had come from the deep South, 32.8 per cent from the Middle West, and 28.8 per cent from outside the U.S.A. Many of those who had come from the deep South, however, had lived in Chicago for a considerable period of time.

In response to why they left school, 27.2 per cent indicated they left because of the need to work, 22.2 per cent indicated that they graduated, 16.1 per cent indicated either pregnancy or marriage, with other reasons of discipline, poor grades, illness and lack of money.

A total of 63.2 per cent of the students indicated they had never had any kind of job training, while the other responses were scattered among mechanical trades, building trades, food trades, office-clerical, sales, Neighborhood Youth Corps, and factory work.

Only 12 per cent of the Wordpower students had a library card when entering the program.

An analysis of the referrals which encouraged the students to enter the program revealed that 19.5 per cent entered without referral, Project Outreach (the community representative) referred only 38.3 per cent, and other agencies like Neighborhood Youth Corps, Job Corps, employer, welfare and school referred the balance.

A total of 68.1 per cent of the students enrolled to improve their employment opportunity, 20.8 per cent in order to function around work and home and read everyday materials, and only 8.3 per cent for recreation. The main goal of students is upgrading their employment potential and becoming more confident in their everyday work.

Only 21.9 per cent of the people indicated any barriers to attending class. These included weather, work, school, health or pregnancy and family responsibilities.

The students live a mean of 11.02 blocks (1 and 3/8 miles) from the Wordpower site. Of the total sample of 273, only 163 lived less than one mile from the Center.

Reviewing the reasons that the students were absent it was found that 20.2 per cent were due to problems of getting to the Center on time, 15.7 per cent due to loss of interest, 13.5 per cent due to new employment, 10.1 per cent due to illness, and 10.1 per cent due to a return to school. Other reasons were family care, a rival program, and a change of residence.

The students' knowledge and interest in the booth is rated by the clerical staff at the Wordpower Centers. It was found that of a maximum possible of 30 points, both the total sample and the sample interviewed averaged very close to 27 points in both knowledge and interest toward the program.

In addition to the information supplied from the Wordpower files, the questionnaire given to the staff and included in Appendix II indicated that they perceived the Wordpower student as being a person who wanted to improve, often on assistance, a school dropout, often a Spanish-speaker wanting to learn English.

In analyzing the primary reason that students enrolled, a majority of the staff felt that it was to upgrade employment, although other reasons were learning English, improving reading skills, and enjoying reading more.

In summary, the majority of students in the Wordpower program are either Negro or Spanish-speaking, both unemployed and underemployed, around 30 years old, who enter the program to give themselves a chance to get a satisfactory job. A majority are heads of their family and primary wage earners, whose average income is below the established poverty level.

Their educational background is spotty, a reported average of an eighth grade education, although most are far below this level as evidenced by their test scores which indicate an average of approximately third grade reading ability. They have received little vocational training.

The students appear to be highly motivated to propel themselves from their blue collar underemployed or unemployable status into a white collar status. Wordpower students represent aspiring, hard working ghetto dwellers who desire to improve their lot by improving themselves.

CHAPTER 4

WHAT ARE THE ATTITUDES TOWARD WORDPOWER?

This chapter summarizes the responses of the 226 Wordpower students interviewed in the initial phase of our evaluation. The complete record of these responses is available in Appendix III. The chapter is organized by paragraphs summarizing information available on a variety of topics, with a concluding summary of all the data.

Other Reading Programs

Of the 226 people responding to the questionnaire, only 19 (8 per cent) indicated they had previously been in a reading program. Those 19 had participated in a total of 12 different kinds of reading programs sponsored by local universities, high schools, senior citizen, reading centers, and churches. Sixteen of these people felt that the previous reading program had helped them in terms of general reading and writing ability. Others commented that the program had helped with mathematics, eye movements and speed, comprehension, grammar and other subjects.

Although 176 students indicated they would enter another program if Wordpower closed, of these 176 only 26 (16 per cent) were able to name the program which they might enter. These data demonstrate that Wordpower is meeting a community need not now satisfied by any other means.

The Things Which Prompted Students to Enter the Wordpower Project

Of a total of 200 responses, 65 students indicated that learning English was the most important aspect of the Wordpower project (these responses came from the two Center sites which have a large Spanish-speaking population), 53 entered to improve their overall reading ability, and 21 students entered to augment

their typing proficiency (this was related to the fact that one Center offered a touch typing program in conjunction with the Operation Wordpower program). Twenty-two students entered because of what they had heard about the Talking Typewriter, and 16 students entered to get a better education. Other reasons were spelling, getting a better job, being able to read more rapidly, improving writing, pronunciation, and vocabulary.

The Important Characteristics About Wordpower

Of the 227 students interviewed, 159 (70 per cent) said it was important that the Wordpower Center was near home, 169 (74.5 per cent) said it was important that they could work at their own speed, 69.5 per cent said it was important that they could work by themselves, 88.5 per cent said it was important that they could choose their own schedule, 39 per cent said it was important that they could bring children to the nursery, and 60 per cent said it was important that they did not have to compete with other students. Clearly the most important factor to students was the flexible scheduling and individualized instruction offered by the Talking Typewriter, with the closeness to home and privacy while learning ranking as secondary concerns.

Reading Materials in Student Homes

A total of 171 people or 75.5 per cent of the total, indicated they have newspapers at home. Of this group, 54.6 per cent buy their papers at the stand, 39.6 per cent have them delivered, and only 5.8 per cent get them from friends. Reading materials are readily available to most Wordpower students, but the per cent using the public library is disappointingly small.

A total of 154 people (67.5 per cent) responded that they had magazines in their home. Of this group, 61 per cent reported that they bought them from the newsstands, 26 per cent that they had them delivered, 11.5 per cent that they got them from friends and relatives, and only 1.5 per cent that they read them in the library.

On the topic of books, a total of 186 students (82 per cent) indicated that they had books in their home. Of this group, 63 per cent indicated that they had bought their books themselves, 23 per cent indicated that they borrowed them from friends, and only 14 per cent indicated that they got them from the public library.

Eighty-two per cent of the students indicated they read newspapers; approximately 45 per cent read the headlines and the advertisements, approximately 30 per cent read the sports and the want ads, and 20 per cent read the comic strips.

Practical Benefits From the Program

In response to the question of what practical things students could not do before the program, 51 per cent indicated that they were not able to read employment ads on entering the program, 53 per cent indicated that they were unable to answer employment ads, and 60 per cent indicated they were unable to fill out job forms.

In response to what the program had helped them with, 67 per cent felt they had been helped in their ability to read employment ads, 57.8 per cent indicated they had been helped in their ability to answer employment ads, 48.9 per cent indicated that they were better able to fill out job forms, and 67.6 per cent indicated that they felt the program prepared them for better jobs.

Support From Home

In response to the question, "How do your friends or family help you succeed," 40 per cent indicated that they received help with their chores, 30 per cent that they received help by babysitting (of course a number of people in the program do not have children), 20 per cent that they were helped with carfare, 35.8 per cent that they received direct help with their reading problems, and 86.3 per cent indicated that they were encouraged by their family to get ahead.

Reading Preferences

A total of 123 students or 54 per cent of the sample, said they most like to read books, 52 or 23 per cent, indicated they liked magazines best, and 50 students or 22.2 per cent indicated they liked newspapers best.

In response to why they like to read, 121 students or 53.8 per cent said their principal motivation was enjoyment, 80 personsor 35.6 per cent indicated it was study, and only 14 or 6.2 per cent indicated shopping or other household duties. When allowed to structure their answer, however, 56.2 per cent indicated they were most interested in reading for job opportunity.

Responding to what they most liked to read, 58 per cent indicated they most liked to read how to do things, 13.3 per cent indicated they liked to read about adventure and action, 31 per cent indicated they liked to read the news, 37.6 per cent indicated they liked to read biographies, and 19 per cent indicated they liked to read about sports. The ability to be able to read instructions and procedures is a most important skill to these students.

Student Evaluation of the Program Materials

A total of 94.7 per cent of the students indicated that they found the stories on the typewriter interesting, and 91.2 per cent that they believed the programs were relevant. These percentages are higher than expected since the Talking Typewriter materials were created for children, and the students are aware that most of the materials cater to children's interests. The favorable responses are in response to the Talking Typewriter as a teaching tool rather than to the materials themselves. In fact the Wordpower program has had to respond to student criticisms about the materials by programming adult oriented software for the Talking Typewriter. The success and popularity of these materials is an indication of the need they have filled.

Sixty per cent of the students indicated they would like to spend more time with the instructor. A total of 51 or 23 per cent of the students responding indicated that they would like to ask questions about the program, 114 or 50 per cent of the responders indicated that they would like to get special help, and 79 or 35 per cent of the responders indicated they would like to work on writing. The significant issue is that students would like to get some type of personalized help besides the machine, and spend more time working on their writing.

In response to the question of what reading materials students would like to be able to take home, 46.9 per cent indicated they would like to have books available, 19.6 per cent that they would like to have magazines available, and 53.2 per cent that they would like to have some type of reading workbook available to take home.

A total of 143 students or 69.4 per cent, indicated they would like to spend more time on the Talking Typewriter, and 47 or 22.8 per cent indicated they would like to spend more time in the reading center.

A total of 155 students or 68.3 per cent of the responders, attributed their success to the Talking Typewriter, and 26 per cent indicated it was the entire reading center. It is likely that the 26 per cent response, indicating the Center, really reflects the combined influence of the Talking Typewriter and the study area together rather than just the study area.

In response to the question "How much time do you spend reading each day", a total of 20 per cent of the students indicated they spent 10 minutes or less reading each day, 64 or 28.4 per cent indicated they were reading 20 to 30 minutes per day, and 116 or 51.6 per cent indicated that they spent over 30 minutes outside the Center reading.

In response to the question "What the program has most helped you read", 69.7 per cent of the students indicated they had been helped in reading signs, labels, and instructions, 58 per cent indicated that they were able to do more

reading for enjoyment, 73.8 per cent indicated they had been helped in being able to study. 45.5 per cent indicated that they are able to read want ads, and 68.5 per cent indicated that their reading achievement makes them more effective in their occupational performance.

These data show the students in the program are reading independent of the program and are better able to fulfill their occupational and personal aspiration.

Summary

The Wordpower students are anxious to learn to read to increase their occupational potential and enhance their sense of personal fulfillment, but have no specific knowledge or plan of how to do this except through the Wordpower program.

The most important feature of the program to students is its individualized instruction format and in particular, its flexible scheduling with privacy. Many students who cannot attend a regular class come regularly to learn via the Wordpower proven educational method. Student attitudes toward the program, their progress, and the Talking Typewriter, are overwhelmingly positive.

To reinforce these findings, we found that when we were interviewing the students, they expressed their concern about cutbacks in the Wordpower program and often tried to prove to us that Wordpower was crucial to their neighborhood. It became clear that the program is extremely important to these students and they are deeply concerned whenever they believe it could be curtailed in any way.

Students receive encouragement at home to pursue their studies, both by direct help and the availability of books, magazines and newspapers. Students spend about thirty minutes a day reading outside of the reading center. Most important of all, the students feel more confident both in future efforts to job hunt, and in carrying out their every day duties on the job they now have.

CHAPTER 5

WHY DO STUDENTS DROP OUT?

Since the student drop out rate is critical to a program like Wordpower, and since student success depends on regular attendance, the information available from the student files was analyzed to determine those variables which explain why Wordpower students drop out.

The first attempt to statistically analyze the variables used multiple discriminate analysis to distinguish between dropouts and non-drops. This method failed since it required that all data be available for every case. Since some data seemed always to be missing for any given student in his file, multiple discriminate analysis would have reduced our comparison groups to the size of three or four students. As an alternative, we relied upon analysis of variance (ANOVA) and Chi-square contingency analysis to compare the groups.

For this analysis, we identified three groups. The first group consisted of those individuals who were either currently enrolled in the program in the Fall of 1969, or had completed the program. The total sample size for this group was 239. The second group included those who had dropped out of the program after less than two months of sustained attendance. This group's size was 80. The final group consisted of those people who were enrolled in the program but did not appear during the four weeks in which we collected data. We classified these people as "ghosts". Logically we believed they should be distributed between the no-drops and the dropouts, since a portion of this group would return to the program and another portion would eventually drop out. This group's size was 51.

The analysis of variance revealed that four important characteristics distinguished among the groups.

The first characteristic was age. The mean for the non-drop group was 33, and the mean for the dropout group was 28, indicating age added stability to the students' attendance in the program.

The second important statistically significant difference among the groups was the number of strokes on the Talking Typewriter they completed per day. The non-drop group completed an average of 325 as opposed to only 233 for the dropout group. This indicates that the non-drop group completed 50 per cent more work than the dropout group.

The third important relationship was the knowledge as rated by the assistants. Here it was found that the non-drop group scored consistently higher in both the knowledge and the interest as rated by assistants that they showed on the machine. Of a possible 3 points, the non-drop means were 2.2 and 2.0, whereas the dropout means were only .9 and 1.45. Clearly, dropouts were students who were failing to achieve in the program.

In addition to the continuous data analyzed by analysis of variance, the discrete data was analyzed by Chi-square contingency analysis, and two statistically significant relationships were found. The first of these was the ethnic group membership of the student. Non-drop students had a significantly higher Spanish-speaking representation than the dropout groups, indicating that the Spanish-speaking population is more likely to persevere in the program.

The second significant relationship was the reason for enrolling. It was found that the non-drop students were significantly more motivated by employment opportunity than either the ghosts or the dropouts (72.8 per cent for the non-drops, versus 49 per cent for the dropouts).

We can characterize the dropout students as being younger, non-Spanish-speaking, and enrolling for a reason other than employment opportunity. His performance at the Center is marked by a lack of daily progress and lower ratings of knowledge and interest by the booth assistants.

Table 3 of Appendix IV describes the rate at which new enrollees entered the program and dropouts occur at each of the four Wordpower sites. This information has been collected between the dates of December 1969 and March 1970

inclusive, and it shows that in general the monthly rates of new enrollment and drops have been about equal. Although there are fluctuations of dropout patterns among the Centers, again for each Center the rate of new enrollees entering to dropouts has remained fairly equal for the past four months.

Several questions were directed to the Wordpower staff to explore the problem of dropout rate. The data summary of their responses is included in Appendix II. When asked to characterize people who dropped out of the program, 22.4 per cent of the staff indicated that they were likely to be people with personal problems, 16.8 per cent that they were students who were not learning, 14 per cent, those that were not motivated, 14 per cent that they were students with conflicts, and 11.2 per cent of the staff indicated they would be students unable to afford transportation to the Wordpower Center.

In response to the question of why they felt students dropped out of the program, the staff responded in the following ways: 35.7 per cent indicated it was for personal problems, 23.8 per cent indicated lack of needed money for transportation, 14.3 per cent that the students did not find the program challenging, and other responses mentioned were motivation, job conflict, health, and lack of progress.

In summary, it appears that some dropouts could be screened before they enter, and that this screening should concentrate on finding older students who are stable and who desire to advance in their occupational goals. The problems that are likely to make the students drop out are transportation and other expenses, and the stability of the home. It would significantly improve a student's chances in the program if he were offered financial and counselling support.

CHAPTER 6

HOW EFFECTIVE IS WORDPOWER IN TEACHING READING

In trying to analyze the effectiveness of a reading program, it is difficult to balance the human values with the cost values with the educational goals intended. The purpose of this section is to examine the important cost characteristics of the program.

To analyze this problem the initial step is to relate reading achievement gains to important student characteristics. To accomplish this, Multivariate Analysis of Covariance was used to test group differences in reading achievement due to the program.

Table V-2 contains the results of this statistical analysis. As shown there none of the group differences were statistically significant, an important result because it indicates that the program is equally effective for men or women, for wage earners or non wage earners, for students referred by themselves, or those referred by agencies, for those who have barriers to attendance or those who have none, and for those who are employed or for those unemployed. No significant differences appeared for any of the important achievement variables including the Word Recognition subtest of the Stanford Achievement test, and Sullivan Book Achievement as measured by progress in the program.

In summary, the Wordpower method appears to work for any group of disadvantaged students.

The results in Table V-3 are the statistical analysis of data available for 93 individuals who were tested twice during their participation in the Wordpower program.

There are four ways of evaluating the student's progress in the Wordpower program.

The Stanford Achievement test is a well-known standardized reading test with Word Recognition and Paragraph Meaning subtests, which has been used extensively with first and second grade youngsters. For this reason, it has limited effectiveness to the Wordpower student. It has been chosen and used primarily out of default, since no adequate standardized test for adults, let alone disadvantaged adults, is available.

The Sullivan Placement Test is a highly unorthodox test which measures grade level improvement, and this test, based on the Sullivan materials, is perhaps somewhat more meaningful for the students in the program.

Perhaps the best measure of achievement in this program is the actual advancement that students make in the program. Since the program is constructed in a programmed instruction format and since students must cover and master a prescribed amount of material in order to progress from one unit to another, it was the opinion of IDI staff that this progress is the most reliable valid measure of actual adult achievement. All of the other measures demand a reference to a population of white middle class children, essentially irrelevant to the Wordpower population.

As seen in Table V-3 of Appendix V, the mean hours for two-grade-level achievement is 54.4 on the average for the SAT, 29.8 for the Sullivan Placement Test, and only 25.1 for the progress in the Sullivan program. Because of the problems in using the SAT and Sullivan tests, we have relied upon progress in the Sullivan program to indicate student gain.

The best conservative estimate of the number of student sessions possible is 25 per day per machine, based on the fact that a student spends an average of 20 minutes per day on the machine, and that the centers are opened a minimum of twelve hours per day. Since there are a total of 20 machines available at the four urban progress centers, 500 students can be accommodated in the Wordpower program at any one time.

The records of actual attendance in the program are available in Tables V-1-A through V-1-D of Appendix V. Each of the Wordpower Centers has been operating considerably below its maximum. The Garfield Center has an average weekly attendance of 232 sessions out of a possible 500, the Montrose Center has an average of 252 weekly sessions out of a possible 750, the Lawndale Center has an average of 172 weekly sessions out of a possible 500, and the King Center has an average of 243 weekly sessions out of a possible 750. Combined, the four Centers average 899 out of a possible 2,500 sessions that students could be attending, for an overall efficiency rating of 36 per cent.

Since Wordpower is an experimental demonstration program not providing stipends or even carfare to students, comparison with the perfectly efficient case may be unfair. It can be imagined that a program operating under these conditions should not be expected to operate at more than 50 per cent efficiency.

There are many reasons for this under-attendance. One reason is that the Wordpower machines are concentrated at too few sites. Each one of these programs could operate with half the machines they are now using, and reach the same adult population. In the future, Wordpower has to deconcentrate its efforts to create more centers with fewer machines in each center.

When asked to reflect on the causes of the attendance problem in Wordpower, the staff gave the following responses as summarized in Appendix II. A total of 41.7 per cent of them indicated it was important to better advertise the program, and 33 per cent indicated that there needed to be some type of incentive to motivate the students to improve their attendance.

To find a solution to these problems, 38.5 per cent of the staff thought it was important that they have better recruitment. The simple conclusion is that the recruitment program, using only Community Representatives as recruiters, has failed to put Wordpower across. This recruitment program for Wordpower is not handled through the program directly, but through the

Chicago Committee on Urban Opportunity Community Representative system. Community Representatives go out into the community and refer individuals to all of the programs and services being offered at the Urban Progress Center. Clearly, there have been problems in getting effective recruitment by this process, and Wordpower will benefit if in the future it develops an auxiliary type recruitment procedure or advertising which reaches the disadvantaged adult interested in improving his reading ability.

As we will describe in Chapter 7, one student who was very enthusiastic about the program recruited over 40 people to enter. It may be that students offer a key to recruitment problems.

If we now introduce some other totals, it is possible to estimate the cost effectiveness of the Wordpower program. The total cost of the Wordpower program has been $35,000 per month.

By using a projection of 25 student hours per two-grade-level achievement, and assuming that two-grade-level as the basis for measuring, we can achieve two estimates of cost. The first estimate would reflect the projected cost per student if the program were running at peak efficiency, and the second would project the cost per student as the program is now functioning.

In the efficient case, it would be possible to expose the students for a total of 833 hours per week, or a gain of 66.6 grades per week, 264.4 per month. Dividing this figure into the total expenditure of $35,000 per month would give us an average cost per student of $131.50 per grade level increase, or $263.00 per two grade in increase.

In the actual situation to date, we find that the Centers are used effectively for only 300 hours per week, again figuring the 25 hours per two-grade-level improvement would give us a gain of 24 grade levels per week, or 96 per month. When this figure is divided into the $35,000 per month total, the average cost per student is $364.50 per grade level increase or $729 per two-grade-level increase.

It is difficult to establish comparative data since no program is effectively teaching reading to the population that Wordpower reaches. A somewhat comparable program is run by the University of Chicago Lab School using individual teachers with students in a one to one relationship. Their rule of thumb for

progress is twenty hours per grade level improvement, or a total of forty hours per two-grade-level improvement to conform to the units we are using for our analysis.

In order for this type of program to compete with the efficient estimate of the Wordpower program, it would be necessary for the tutoring program to operate at a cost of slightly more than $6.00 per hour per student hour. This $6.00 would have to pay for the time of the individual tutor, the expenses of materials for the program, the expenses for disposable materials used by the student, and the cost of the overhead to keep the program running. This, of course, would not include the development of new reading materials or the study area center where students are given time to re-work the materials which they have covered during their daily lesson.

In conclusion, therefore, the results of this section indicate that Wordpower could become more cost effective than alternate methods of teaching reading. Unfortunately, because of problems in recruitment and the placement of machines, Wordpower has been operating at only 35 per cent efficiency. Wordpower should attempt to place fewer machines at more Urban Progress Center sites, and second to devise some means of auxiliary recruitment which does not depend solely upon Project Outreach and the Community Representative. Both of these recommendations are included in future plans for Wordpower.

CHAPTER 7

BEYOND THE STATISTICS

New Materials for Adults

To meet student needs and to provide materials at the fifth and sixth grade levels, the Wordpower research staff has adapted materials to supplement the Sullivan reading materials available on the Talking Typewriter.

The more than 27 programs they have now adapted range from biography to science and current events. In adapting a program, the staff first identifies the key vocabulary for a written story which they want the students to read. This vocabulary is then presented in several formats on the Talking Typewriter to assist the student in word discrimination, spelling and vocabulary and enable him to read the story independently of the machine. The programs, therefore, not only utilize the unique capacities of the Talking Typewriter, but also serve as a stepping stone to encourage the student to become an independent reader. Each program requires approximately 30 man-hours of programming time, in addition to the necessary illustration and research. The effort to date, therefore, represents a significant expenditure of time: approximately 900 man-hours, materials and money. The product has been a series of materials well received by Wordpower students.

Although the format and content for the programs have tended to be stereotyped they can be, and undoubtedly will be improved. They do represent a successful first attempt to provide relative reading experiences for the disadvantaged Wordpower student. No such materials are now available on the market.

The work invested pays off in two ways. First it provides better quality materials for the Wordpower program, and second, it makes adult materials available to any future programs which use the Edison Responsive Environment.

IDI has created and sent a detailed critique of the current programs and methods used by the research staff. The details of this report need not be reiterated here.

In summary, Wordpower has invested considerable time and money in the development of materials relevant to the disadvantaged adults in response to the requests and needs of students. These materials fill a void which is now existing in adult reading programs.

Case Histories of Wordpower Students

In evaluating a program like Wordpower, statistics tell a cold and impersonal story because they do not describe the importance of reading to a disadvantaged adult. To honestly help these people, you must approach them as individuals rather than a massive veil of statistics and digits.

The following section of this chapter includes a number of summaries of the more than 40 cases we have on file of individuals who have directly benefited from the Wordpower program.

A young woman who was working as a waitress because she was not able to read and write effectively, found she was not able to sufficiently support herself and her family, and yet she could not move on to a better job. She enrolled in the Wordpower program and improved her reading and writing sufficiently to qualify her to enter the Graduate Education Diploma classes. She is presently employed by the U.S. Treasury Department, and her salary has increased by more than 150 per cent.

A Spanish-speaking woman from Puerto Rico who had only a limited English vocabulary and was not able to speak English adequately, enrolled in the Wordpower program. She found that it helped her so much that she has gone on to recruit over 40 Spanish-speaking students to the Lawndale Center on the west side of Chicago.

Another young woman, presently enrolled at Malcolm X College, had tried to become a practical nurse. She failed her exam twice, and found it was her reading that held her back. She enrolled in Wordpower, and through regular attendance, hard work and encouragement, has significantly increased her reading level, and is now moving on to a teaching career.

A young man from St. Louis came to the Lawndale Urban Progress Center looking for a job. He wanted to earn enough money to return to St. Louis and reenter school there, but was unable to find any job because of his poor reading, spelling and diction. During the year and a half he spent in the Wordpower program, his reading ability doubled and he was able to pass the entrance exam to the Marine Corps. He is now serving his country in uniform.

Another woman referred to Wordpower by the Illinois State Employment Service, applied for enrollment in a training program for Licensed Practical Nurses, but was not able to pass the reading examination. She enrolled in Wordpower for only one month, took the exam once more and passed. She is now attending classes and on her way to becoming a practical nurse.

Another young woman was unable to distinguish among the letters of the alphabet when she first enrolled in the Wordpower program. Through her work in the program, she not only has learned to read, but has also become proficient in typing. She is now employed by the Model Cities Program here in Chicago.

Three young men came to the Wordpower Center under a program, Project Alternative. This program gives parolees the opportunity to complete their education so they can find employment when released from prison. The three men had low reading levels and seemed at first completely disinterested in improving themselves. They entered the Wordpower project and within two months began to inquire about reading materials related to electronics and mechanics and began to read. They are now enrolled in a vocational training program which will help them find a place in society once more.

A young woman interested in becoming a nurse had not completed high school. Her reading level was below that necessary to pass the entrance examination. She entered Wordpower and later went on to the Graduate Education Diploma classes. She has successfully passed that program and is well on her way to becoming a licensed practical nurse.

Another young woman, unable to help her children with their school work because of her own limited reading ability, came to Wordpower for assistance. After hard work and intensive study, she is now able to help them advance in their school work as well as increase her own knowledge.

Another young man had lived in the United States for seven years, and yet had not learned enough English to secure a good job. He enrolled in Wordpower. After only one year of attending the Wordpower classes, he now can not only speak but read and write English effectively. He stopped attending the classes at Wordpower because he found he was able to get a better job, an objective which he had long sought.

Another man who entered the Wordpower program was unable to recognize the letters of the alphabet or any numerals. He proved to be an exceptional student. Within three months he was capable of writing his name and counting money. Besides continuing his studies with Wordpower, he is now employed at a small grocery store, and works as cashier.

A young woman who completed the sixth grade and yet had a reading level below the second grade attended Wordpower classes. She is now enrolled in a typing class, works in the cafeteria section of the Board of Education, and is planning to enter the Grade Education Diploma classes.

Reading is often related to problems which result from the feelings of inadequacy that an adult non reader may have. As a case in point, a young man was referred to Wordpower because he had been hostile to his supervisors in all of the positions in which he had worked. Through a sense of accomplishment which he found at Wordpower, he has not only been able to cope with these problems, but to handle his job more effectively.

A young woman who believed that her employment opportunities were severly limited because of her poor education and her low reading ability, enrolled in the Wordpower program to improve the economical potential of her life. After a few months of hard study, she began to do typing. She became so good that she is now employed with the Garfield Neighborhood Community Center as a community representative.

During the summer of last year, a high school girl enrolled in the program, since her application to a new school had been rejected because her reading ability was below that necessary for her to succeed. By the end of the summer, she had increased her reading level sufficiently to be accepted into the new school. In appreciation, her parents sent a letter to the Wordpower staff.

A woman who had only completed the third grade enrolled in the Wordpower program. She was minimally able to read and was forced to bring personal mail to the Center and have staff members read it to her. After several months of study with Wordpower, she surprised the members of her church by reading from the Bible extemporaneously one Sunday.

Another woman unable to pass the exam to enter the Graduate Education Diploma program enrolled in Operation Wordpower. Through Wordpower's extensive vocabulary drills and special assistance given her in comprehension and vocabulary, her reading ability increased sufficiently to help her enter the GED program.

When a man cannot sign his name, he has difficulty cashing a pay check in Chicago. That was the main reason that one student enrolled. The simple necessities of his life demanded that he be able to read and write. Through the Wordpower program he is now able to fulfill the basic needs he finds in his every day life.

A young girl who entered high school with a reading level below grade three was faced with a problem of having to drop out. Since she could not maintain the basic necessities of study, she enrolled in the Wordpower program when she discovered she could not find a job. During the summer she better than doubled her reading level, and now plans to return to school to finish her high school education.

One man who entered the program had a limited reading ability, and wanted to improve his reading so that he could read the newspaper. Through Wordpower he has learned to read sufficiently to keep informed on current events, and feels now that he has succeeded in becoming a better citizen.

One woman who entered the program could not read or write, although she knew the basic alphabet but was unable to write some of the letters. After a year in the program, she can now both read and write at the sixth grade level. She is continuing in the program as far as Wordpower can take her, and plans later to enroll in the GED classes.

Another woman, after failing the GED examination, entered the Wordpower program. Through special assistance and special help to prepare her for re-testing, she was able to pass the GED exam, and is now on her way to getting a high school diploma.

Besides these examples, our files contain a number of examples of many other students who have been directly helped as a result of increased reading ability. Unfortunately, we cannot accurately estimate the number of people who were helped and went on to jobs or opportunities without telling the staff.

The important point of this chapter is that Wordpower has helped these people in a very direct and personal way. Some are able to get into another educational program, others to learn a trade, get a better job or to find more satisfaction in their job and their life. These are things which must be measured not only by numbers or dollars and cents, but also by the increase of human potential.

CHAPTER 8

SUMMARY AND CONCLUSIONS

This section draws together the various elements and conclusions which have been identified in the previous chapters.

First, it is apparent that Wordpower is meeting an important community need. The program is effective in reaching disadvantaged adults who are concerned that they lack reading and writing skills, and believe this holds them back from occupational advancement. It is clear that the students know of no other program or source of help if Wordpower were closed. The students are protective of the program and refer to it with glowing terms.

Wordpower has had a definite recruitment problem. Their screening policy has been to reject students above the fifth grade in reading ability, but it is clear that many students with only minimal interest have been admitted and then dropped from the program. There is no way in which Wordpower can presently motivate students to regular attendance. These two conditions lead to the situation that Wordpower is only partially effective when compared to its potential.

Perhaps the most important evidence are the case histories which show that Wordpower is accomplishing the important job of teaching reading to people who desperately need some kind of educational assistance. Chapter 7 demonstrates how relevant the program has been to many students and how it has operated as a stepping stone to enable students to go on to goals impossible before they learned to read effectively.

Wordpower also is contributing to the area of adult education reading programs by creating materials which are effective teaching reading to adults.

The data presented in this report indicates that Wordpower is an important and meaningful reading program carrying out an important function, but that it must be made cost effective by moving to more locations and by instituting a more effective recruitment and motivational program, a direction it is already moving towards. Certainly it offers greater flexibility and promise than traditional tutoring or classroom approaches, since it accommodates students when they can come, insuring them the privacy necessary to instill their confidence and security.

The final report will reexamine the results of this report and will also document student gains in writing and verbal expression.

APPENDIX I

CHARACTERISTICS OF WORDPOWER STUDENTS

	Total Sample	Percentage	Sample Interviewed	Percentage
1. Sex Distribution				
Female	277	74.7	160	75.1
Male	94	25.3	53	24.9
2. Age				
Mean age	31.18		32.18	
Median age	28		30	
3. Marital Status				
Unmarried	144	44.0	74	37.6
Married	130	39.8	83	42.1
Divorced	21	6.4	14	7.1
Widowed	32	9.8	26	13.2
4. Head of Household				
Not head of household	172	49.3	98	49.0
Head of household	177	50.7	102	51.0
5. Primary Wage Earner				
Not primary wage earner	163	48.5	91	46.9
Primary wage earner	173	51.5	103	53.1
6. Number in Family				
Mean	3.99		3.80	
Median	4		4	
7. Handicapped				
No	299	95.8	186	95.4
Yes	13	4.2	9	4.6

	Total Sample	Percentage	Sample Interviewed	Percentage
8. Ethnic Group				
Urban Negro	201	62.0	108	55.4
Rural Negro	37	11.4	25	12.8
Spanish-Speaking	86	26.5	62	31.8
9. Speech or Language				
No speech difficulty	157	57.9	86	50.6
Foreign language	88	32.5	62	36.5
Lack of knowledge	21	7.7	18	10.6
Physical	5	1.8	4	2.3
10. Public Assistance				
No	213	70.8	128	72.3
Yes	88	29.2	49	27.7
11. Family Size				
Mean	3.70		3.66	
Median	3		3	
12. Labor Status				
Unemployed	188	57.8	96	51.1
Underemployed	10	3.1	9	4.8
Employed	123	37.8	81	43.1
Part Time	4	1.2	2	1.1
13. Reason Unemployed				
In school	17	15.9	3	6.1
Health	5	4.7	4	8.2
Disability	6	5.6	2	4.1
Family responsibilities	42	39.3	20	40.8
Lack of skills	12	11.2	7	14.3
Lack of Education	2	1.9	1	2.0
Pregnancy	1	0.9	1	2.0
Other	16	14.6	9	18.4
Senior citizen	6	5.6	2	4.1

	Total Sample	Percentage	Sample Interviewed	Percentage
14. Salary - Last Job				
Mean	$1.84		$1.89	
15. Weeks Employed				
Mean	36.3		34.6	
16. Years Employed				
Less than one year	69	39.9	46	39.0
One to two years	25	14.4	17	14.4
Three to nine years	38	21.7	26	22.0
Ten and over	41	23.7	29	24.6
17. Type of Job				
Factory	58	31.4	45	34.1
Mechanical	11	5.9	11	8.3
Office - Clerical	14	7.6	7	5.3
Sales	5	2.7	3	2.3
Building trades	3	1.6	2	1.5
Food service trades	23	12.4	15	11.4
Managerial	1	0.5	1	0.8
Other	52	28.1	36	27.3
Neighborhood Youth Corps	18	9.7	12	9.1
18. Income - Per Hour				
Mean	$2.21		$2.31	
19. Total Income				
Mean	$3,568		$3,777	

	Total Sample	Percentage	Sample Interviewed	Percentage
20. Occupational Goal				
Factory work	14	6.5	13	9.2
Mechanical	18	8.3	11	7.7
Office - clerical	40	18.4	25	17.6
Sales	4	1.8	2	1.4
Building trades	1	0.5	1	0.7
Food trades	3	1.4	2	1.4
Managerial	0	0	0	0
Technical	8	3.7	7	4.9
Professional	41	18.9	26	18.3
Service	11	5.1	10	7.0
Other	29	13.4	23	16.2
Don't know	44	20.3	20	14.1
Senior citizen	4	1.8	2	1.4
21. Type of Residence				
Chicago Housing Authority	52	18.2	24	14.7
Private rental	220	77.2	130	79.8
Own	13	4.6	9	5.5
22. Number of Rooms				
Mean	4.88		4.85	
Median	5			
23. Residence in Chicago				
Less than one year	62	20.6	42	21.8

	Total Sample	Percentage	Sample Interviewed	Percentage
24. Changes in Residence in Past Two Years				
No changes	130	54.6	83	53.2
One change	64	26.9	42	26.9
Two or more changes	44	18.5	31	19.9
25. Highest Grade				
Mean	8.04			
Less than 8th grade	94		59	
26. Age when Completed				
Mean	17.53		17.27	
27. Region with Majority of Training				
Deep south (Florida, Georgia, Alabama, Mississippi, Texas, Arkansas, South Carolina, North Carolina)	91	33.2	63	35.4
Middle south (Missouri, Tennessee, Virginia, Kentucky, West Virginia	11	4.0	9	5.1
East of Ohio	3	1.1	3	1.7
Mid West - Ohio-North Dakota	90	32.8	47	26.4
Outside U.S.A.	79	28.8	56	31.5
28. Reason for Leaving School				
Graduation	58	22.2	37	20.9
Pregnancy or married	42	16.1	27	15.3
Work	71	27.2	55	31.1
Discipline	8	3.1	7	4.0
Poor grades	7	2.7	6	3.4
Illness	10	3.8	6	3.4
Lack of money	3	1.1	1	0.6
Other	62	23.8	38	21.5

	Total Sample	Percentage	Sample Interviewed	Percentage
29. Previous Job Training				
None	160	63.2	104	62.6
Mechanical trades	3	1.2	4	2.4
Building trades	3	1.2	1	.6
Food trades	1	0.4	1	.6
Office - clerical	23	9.1	13	7.8
Sales	3	1.2	2	1.2
Neighborhood Youth Corps	18	7.1	9	5.4
Factory	10	4.0	10	6.0
Other	32	12.6	22	13.3
30. Library Card				
No	227	88.0	156	89.1
Yes	31	12.0	19	10.9
31. Referred By				
Self	55	19.5	36	20.1
Out reach	108	38.3	75	41.9
Neighborhood Youth Corps	28	9.9	14	7.8
Job Corps	4	1.4	2	1.1
Employer	10	3.5	10	5.6
Welfare	1	0.4	0	0
School	13	4.6	6	3.4
Other	63	22.3	36	20.1
32. Reason for Application				
Read for recreation	24	8.3	13	7.4
Employment opportunity	196	68.1	134	76.1
Everyday materials	60	20.8	27	15.3
Other	8	2.8	2	1.1

	Total Sample	Percentage	Sample Interviewed	Percentage
33. Barriers to Attending Class				
None	207	78.1	136	82.4
Weather	14	5.3	8	4.8
Work	11	4.2	6	3.6
School	5	1.9	2	1.2
Health - pregnant	11	4.2	4	2.4
Family responsibilities	17	6.4	9	5.5
34. Distance in blocks				
Mean	11.02		10.94	
Median	8		7	
Less than one mile	163			
35. Reason for Absence				
Illness	9	10.1	2	20.0
Employment	12	13.5	1	10.0
Family care	5	5.6	0	
New program	4	4.5	0	
Not interested	14	15.7	1	10.0
Returned to school	9	10.1	1	10.0
Other	12	13.5	0	
Inadequate information	18	20.2	4	40.0
Moved	6	6.7	1	10.0
36. Total Sessions Attended				
Mean	26.87		32.90	
Median	20			
37. Total Absence				
Mean	11.51		12.30	
Median	8			

	Total Sample	Percentage	Sample Interviewed	Percentage
38. Knowledge				
Mean (Maximum possible - 40)	27.11		27.33	
39. Interest				
Mean (Maximum possible - 40)	27.62		28.20	

APPENDIX II

RESPONSE PATTERNS OF WORDPOWER STAFF MEMBERS TO THE WORDPOWER STAFF QUESTIONNAIRE

Question 1a - What kind of people enroll in this program?

	No. of Staff Response	Per cent of Total Response
People wanting to improve	10	32.3
People on assistance	8	25.8
School drop outs	5	16.1
Spanish wanting to learn English	5	16.1
Unemployed	3	9.7
Total significant response	31	

Question 1b - What seems to be their main reason for enrolling?

	No. of Staff Response	Per cent of Total Response
To upgrade employment	16	53.3
To learn English	5	16.7
To improve in reading ability	5	16.7
To enjoy reading more	4	13.3
Total significant response	30	

Question 2a - What kind of people drop out of the program?

	No. of Staff Response	Per cent of Total Response
Those with personal problems	8	22.4
Those not learning	6	16.8
Those not motivated	5	14.0
Those with job conflicts	5	14.0
Those who need money for transportation	4	11.2
Total significant response	28	

Question 2b - Why do they drop out?

	No. of Staff Response	Per cent of Total Response
Personal problems	15	35.7
Need money for transportation	10	23.8
Program is not challenging	6	14.3
No motivation	4	9.5
Job conflict	3	7.2
Health	2	4.8
Not learning	2	4.8
Total significant response	42	

Question 3a - What do you like best about the program?

	No. of Staff Response	Per cent of Total Response
Helping others	20	64.5
Meeting people	11	35.5
Total significant response	31	
Why?		
Satisfaction in helping	20	61.0
Self improvement of student	8	24.2
Can help job opportunities	5	15.1
Total significant response	33	

Question 3b - What do the enrollees like best about the program?

	No. of Staff Response	Per cent of Total Response
Machines	20	61.0
Privacy	6	18.2
Supplementary materials	6	18.2
Time factors for work	1	3.0
Total significant response	33	

Question 3b (continued)

Why?	No. of Staff Response	Per cent of Total Response
Because they learn	14	56.0
Privacy	7	28.0
Because they can get jobs	3	12.0
Personal attention	1	4.0
Total significant response	25	

Question 4 - What suggestions would you make for improving the program?

	No. of Staff Response	Per cent of Total Response
Advertise	5	41.7
More supplementary materials	4	33.3
More space	3	25.0
Total significant response	12	

Question 5a- Have you noticed any difficulties that the program has had?

	No. of Staff Response	Per cent of Total Response
Motivation to attend	7	33.3
Not enough students (advertise)	6	28.6
Mechanical problems with machines	5	23.9
Too easy	3	14.3
Total significant response	21	

Question 5b - What could be done about them?

	No. of Staff Response	Per cent of Total Response
Recruitment	5	38.5
Staff meetings	2	15.4
More materials	2	15.4
More personal contact	2	15.4
Provide transportation	1	7.7
Qualified people (teachers)	1	7.7
Total significant response	13	

Question 7 - Could you suggest additional things students should be doing in the study areas?

	No. of Staff Response	Per cent of Total Response
Advanced materials (supplements)	10	62.5
Tape recorders (pronunciation)	2	12.5
Employment forms (practice)	2	12.5
Work on individual problems	1	6.3
Recreation	1	6.3
Total significant response	16	

APPENDIX III

RESPONSES OF WORDPOWER STUDENTS TO THE WORDPOWER QUESTIONNAIRE

1. HAVE YOU BEEN IN A READING PROGRAM BEFORE, OTHER THAN IN SCHOOL?

	Number of Responses	Percentage
No	207	91.6
Yes	19	8.4

1a. IF YES, WHAT WAS THE PROGRAM CALLED?

Loop Junior College	-	2
Loyola University	-	1
Manpower	-	1
General Education	-	2
Senior Citizen	-	1
Phillips Night School	-	1
Marshall Night School	-	1
Hilliard Education	-	2
Marion Business College	-	1
Cain Academy	-	2
Church Reading Program	-	4

2. IF WE DIDN'T HAVE THIS PROGRAM WOULD YOU TRY TO ENTER SOME OTHER READING PROGRAM?

	Number of Responses	Percentage
No	49	21.8
Yes	176	78.2

2a. DO YOU KNOW OF ANOTHER PROGRAM?

	Number of Responses	Percentage
No	201	88.5
Yes	26	11.5

3. WHAT THINGS ABOUT THE PROGRAM WERE IMPORTANT TO YOU WHEN YOU DECIDED TO ENTER THE PROGRAM?

Talking Typewriter	-	22
Staff	-	2
Better Reading	-	53
Better Writing	-	2
Pronunciation	-	1
Vocabulary	-	2
Learning English	-	65
Typing	-	22
Better Education	-	16
Better Job	-	4
Curiosity	-	1

3a. ANSWER "YES" TO ANY OF THE FOLLOWING THAT WERE VERY IMPORTANT AND NO TO THE OTHERS.

	Number of Responses	Percentage
IT WAS NEAR YOUR HOME.		
No	68	30
Yes	159	70
YOU COULD WORK AT YOUR OWN SPEED.		
No	58	24.5
Yes	169	74.5
YOU COULD WORK BY YOURSELF		
No	70	30.5
Yes	157	69.5
YOU COULD CHOOSE THE TIME TO COME.		
No	27	11.5
Yes	200	88.5

	Number of Responses	Percentage
YOU COULD BRING CHILDREN TO THE NURSERY.		
No	139	61
Yes	89	39
YOU DON'T HAVE TO COMPETE WITH OTHER STUDENTS.		
No	90	40
Yes	136	60

4. DO YOU HAVE NEWSPAPERS AT HOME?

	Number of Responses	Percentage
No	55	24.5
Yes	172	75.5

4a. WHERE DO YOU GET YOUR NEWSPAPERS?

	Number of Responses	Percentage
Delivered	68	39.6
Buy them	94	54.6
Library	0	0
From friends or relatives	10	5.8

5. DO YOU HAVE MAGAZINES AT HOME?

	Number of Responses	Percentage
No	73	32.5
Yes	154	67.5

5a. WHERE DO YOU GET THE MAGAZINES?

	Number of Responses	Percentage
Delivered	40	26
Buy them	94	61
Library	2	1.5
From friends or relatives	18	11.5

6. DO YOU HAVE BOOKS AT HOME?

	Number of Responses	Percentage
No	41	18
Yes	186	82

6a. WHERE DO YOU GET YOUR BOOKS?

	Number of Responses	Percentage
Buy them	63	63
Library	14	14
From friends or relatives	23	23

7. WHAT DO YOU LIKE TO READ MOST?

	Number of Responses	Percentage
Books	123	54.5
Magazines	52	23.3
Newspapers	50	22.2

7a. WHY DO YOU LIKE TO READ?

	Number of Responses	Percentage
For enjoyment	121	53.8
For study	80	35.6
For shopping and around the home	14	6.2
Other	10	4.4

8. DO YOU READ NEWSPAPERS?

	Number of Responses	Percentage
No	41	18
Yes	186	82

8a. WHAT SECTIONS DO YOU TURN TO?

	Number of Responses	Percentage
HEADLINES - FRONT PAGE		
No	174	54.7
Yes	144	45.3
SPORTS		
No	149	68.3
Yes	69	31.7
COMICS - FUNNIES		
No	174	79.8
Yes	44	20.2
WANT ADS		
No	135	62.2
Yes	82	37.8
STORE ADVERTISEMENTS OR SALES		
No	118	54.4
Yes	99	45.6

9. HAVE YOU HAD A STEADY JOB?

	Number of Responses	Percentage
No	92	40.5
Yes	135	59.5

IF YES, WHAT DID YOU DO?

Factory	- 24
Assembly	- 24
Machine Operator	- 13
Clerk	- 9
Laundry	- 8
Secretarial	- 7
Packing	- 6
Nurses Aid	- 5
Custodian	- 5

9a. WHAT DID YOU LIKE ABOUT YOUR JOB?

Everything	- 67
Public Contact	- 20
Money	- 15

10. WHAT KIND OF JOB WOULD YOU LIKE TO HAVE NOW?

	Number of Responses	Percentage
A JOB WHERE YOU PUT THINGS TOGETHER.		
No	158	69.6
Yes	69	30.4
A JOB WHERE YOU READ.		
No	177	78.3
Yes	49	27.7

	Number of Responses	Percentage
A JOB WHERE YOU SELL TO PEOPLE.		
No	172	78.2
Yes	55	21.8
A JOB WHERE YOU WRITE.		
No	185	81.9
Yes	41	18.1
A JOB WHERE YOU WORK ON MACHINES.		
No	122	53.4
Yes	104	46.6

11. WHAT THINGS COULDN'T YOU DO BEFORE YOU BEGAN THE PROGRAM?

	Number of Responses	Percentage
READ ADS.		
No	109	48.4
Yes	116	51.6
ANSWER ADS.		
No	104	46.2
Yes	121	53.8
FILL OUT JOB FORMS.		
No	89	39.6
Yes	136	60.4

12. WHAT THINGS CAN YOU DO BETTER BECAUSE OF THE READING YOU LEARNED HERE?

	Number of Responses	Percentage
READ ADS.		
No	74	32.9
Yes	151	67.1
ANSWER ADS		
No	95	42.2
Yes	130	57.8

		Number of Responses	Percentage
FILL OUT JOB FORMS.			
	No	79	51.1
	Yes	146	48.9
BETTER JOB.			
	No	73	32.4
	Yes	152	67.6

13. WHAT GRADE DID YOU FINISH IN SCHOOL?

Grade	Number of Responses
1	5
2	9
3	13
4	6
5	10
6	27
7	14
8	52
9	9
10	30
11	19
12	24

14. DO YOU PLAN TO GET MORE SCHOOLING?

	Number of Responses	Percentage
No	35	15.7
Yes	188	84.3

14a. WHAT KIND OF SCHOOL PROGRAM WOULD YOU LIKE IF YOU GO BACK?

	Number of Responses
Get a school diploma	112
Learn a skill or trade	61
Go to college	14

15. HOW DO YOUR FRIENDS OR FAMILY HELP YOU SUCCEED IN THIS PROGRAM?

	Number of Responses	Percentage
DO THEY HELP WITH CHORES?		
No	136	60.2
Yes	90	39.8
DO THEY BABYSIT?		
No	160	70.8
Yes	66	29.2
DO THEY GIVE CARFARE?		
No	182	80.5
Yes	44	19.5
DO THEY HELP WITH READING?		
No	145	64.2
Yes	81	35.8
DO THEY WANT YOU GO GET AHEAD?		
No	31	13.7
Yes	195	86.3

16. ARE YOU MOST INTERESTED IN LEARNING TO READ:

	Number of Responses	Percentage
FOR ENJOYMENT.	32	14.1
FOR STUDY.	58	25.7
FOR SHOPPING AND AROUND THE HOME.	9	4
FOR JOB OPPORTUNITY.	127	56.2

17. WHAT DO YOU LIKE TO READ ABOUT MOST?

		Number of Responses	Percentage
HOW TO DO THINGS			
	No	94	41.8
	Yes	131	58.2
ADVENTURE AND ACTION			
	No	195	86.7
	Yes	30	13.3
NEWS			
	No	154	68.1
	Yes	72	31.9
STORIES ABOUT REAL PEOPLE			
	No	141	62.4
	Yes	85	37.6
SPORTS			
	No	183	81
	Yes	43	19

18. ARE THE STORIES ON THE TYPEWRITER INTERESTING?

	Number of Responses	Percentage
No	12	5.3
Yes	213	94.7

19. ARE THEY ABOUT IMPORTANT THINGS?

	Number of Responses	Percentage
No	20	8.8
Yes	206	91.2

20. SHOULD MORE TIME BE SPENT ON STUDENTS WORKING WITH THE INSTRUCTOR?

	Number of Responses	Percentage
No	80	35.6
Yes	145	64.4

20a. WHAT WOULD YOU LIKE TO SPEND MORE TIME WITH THE INSTRUCTOR DOING?

	Number of Responses	Percentage
ASKING QUESTIONS ABOUT THE PROGRAM		
No	174	77.3
Yes	51	22.7
GETTING SPECIAL HELP		
No	112	49.6
Yes	114	50.4
WORKING ON WRITING		
No	146	64.9
Yes	79	35.1

21. WHAT THINGS SHOULD YOU BE ABLE TO TAKE HOME?

	Number of Responses	Percentage
BOOKS		
No	120	53.1
Yes	106	46.9
MAGAZINES		
No	180	80.4
Yes	44	19.6
WORKBOOKS		
No	108	47.8
Yes	118	53.2

22. WHAT WOULD YOU LIKE TO SPEND MORE TIME ON?

	Number of Responses	Percentage
ON THE TALKING TYPEWRITER	143	69.4
IN THE READING CENTER	47	22.8
OTHER THINGS	16	7.7

23. HOW MUCH TIME, OUTSIDE OF THE CENTER, DO YOU SPEND READING EACH DAY?

	Number of Responses	Percentage
NONE	13	5.8
10 MINUTES OR LESS	32	14.2
20 TO 30 MINUTES	64	28.4
OVER 30 MINUTES	116	51.6

24. HAS WHAT YOU LEARNED HELPED YOU WITH:

	Number of Responses	Percentage
READING SIGNS, LABELS AND INSTRUCTIONS.		
No	69	30.3
Yes	159	69.7
READING FOR ENJOYMENT.		
No	95	42
Yes	131	58
READING TO LEARN SOMETHING.		
No	59	26.2
Yes	166	73.8
READING WANT ADS.		
No	122	54.5
Yes	102	45.5
READING TO DO BETTER ON A JOB.		
No	70	31.5
Yes	152	68.5

25. WHICH WAS MOST HELPFUL TO YOU IN READING?

		Number of Responses	Percentage
THE TALKING TYPEWRITER			
	No	70	15.7
	Yes	155	68.3
BEING IN THE READING CENTER			
	No	165	37
	Yes	59	26
SOMETHING ELSE			
	No	211	47.3
	Yes	13	5.7

APPENDIX IV

TABLE IV-1

ANALYSIS OF VARIANCE FOR DROPOUTS VS. OTHERS

Variable	Non-Drop Mean	"Ghost" Mean	Dropouts	F Ratio
Age	33.076	27.380	27.988	F (2,364) = 7.1269**
Number in family	3.920	3.923	4.217	F (2,279) = .3740
Personal income	$2.09/hour	$1.83/hour	$1.85/hour	F (2,76) = .1631
Family income	$3,533/year	$3,564/year	$3,436/year	F (2,70) = .0151
Highest grade attained	7.53	8.55	8.12	F (2,199) = 1.2526
Distance to the Center	11.07 blocks	9.93 blocks	11.53 blocks	F (2,309) = .2661
Sullivan Placement Test	2.401	3.429	2.633	F (2,362) = 5.2430**
Strokes per day	325.01	282.02	233.51	F (2,369) = 2.9911*
Knowledge (rated by assistants, three point scale)	2.181	1.532	.914	F (2,369) = 7.0411**
Interest (rated by assistants, three point scale)	2.02	1.02	1.45	F (2,369) = 3.5946**

* $p < .05$

** $p < .01$

TABLE IV-2

CHI-SQUARE CONTINGENCY ANALYSIS FOR DROPOUTS VS. OTHERS

TABLE IV-2-A - Sex, With Column Percents

	Non-Drops	"Ghosts"	Dropouts
Females	54 (22%)	15 (29.4%)	24 (30%)
Males	185 (77%)	36 (70.6%)	56 (70%)

Chi-Square (2) = 2.322

TABLE IV-2-B - Ethnic Group, With Column Percents

	Non-Drops	"Ghosts"	Dropouts
Negro	150 (65.8%)	34 (82.9%)	53 (81.5%)
White	8 (3.5%)	0 (0.0%)	2 (3.1%)
Spanish	70 (30.7%)	7 (17.1%)	10 (15.4%)

Chi-Square (4) = 10.143*

TABLE IV-2-C - Economic Assistance With Column Percents

	Non-Drops	"Ghosts"	Dropouts
None	149 (73.8%)	21 (51.2%)	43 (74.1%)
Receiving public assistance	53 (26.2%)	20 (48.8%)	15 (25.9%)

Chi-Square (2) = 8.767*

TABLE IV-2-D - Employment History With Column Percents

	Non-Drops	"Ghosts"	Dropouts
None	130 (60.5%)	23 (52.3%)	44 (67.7%)
At least one job	85 (39.5%)	21 (47.7%)	21 (32.3%)

Chi-Square (2) = 2.648

*$p < .05$

**$p < .01$

TABLE IV-2, (continued)

TABLE IV-2-E - Region Where Raised, With Column Percents

	Non-Drops	"Ghosts"	Dropouts
Far South	69 (34.0%)	10 (30.0%)	12 (33.3%)
South	9 (5.4%)	2 (6.9%)	0 (0.0%)
Midwest	58 (28.6%)	15 (45.4%)	16 (44.4%)
Foreign	65 (32.0%)	6 (17.6%)	8 (22.2%)

Chi-Square (6) = 8.324

TABLE IV-2-F - How Referred, With Column Totals

	Non-Drops	"Ghosts"	Dropouts
Self	42 (20.7%)	9 (23.1%)	4 (10.0%)
Other	161 (79.3%)	30 (76.9%)	39 (90.0%)

Chi-Square (2) = 2.800

TABLE IV-2-G - Reason for Enrolling

	Non-Drops	"Ghosts"	Dropouts
Employment	147 (72.8%)	24 (66.7%)	24 (49.0%)
Adult Education	36 (17.8%)	8 (22.2%)	16 (32.7%)
Recreation	16 (7.9%)	4 (11.9%)	4 (8.2%)
Other	3 (1.5%)	0 (0.0%)	5 (10.2%)

Chi-Square (6) = 19.755**

* $p < .05$

** $p < .01$

TABLE IV-3

New Enrollees and Drops at the Wordpower Sites

Center	December 1969		January 1970		February 1970		March 1970	
	New Enrollees	Drops	New Enrollees	Drops	New Enrollees	Drops	New Enrollees	Drops
Garfield	6	4	50	40	28	19	35	30
King	11	8	17	23	18	14	24	36
Lawndale	19	31	8	49	8	1	78	56
Montrose	18	16	28	5	16	33	21	18
TOTAL	54	59	103	117	70	67	158	140

* $p < .05$

** $p < .01$

APPENDIX V

TABLE V-1-A

WEEKLY ATTENDANCE
GARFIELD NEIGHBORHOOD SERVICE PROGRAM

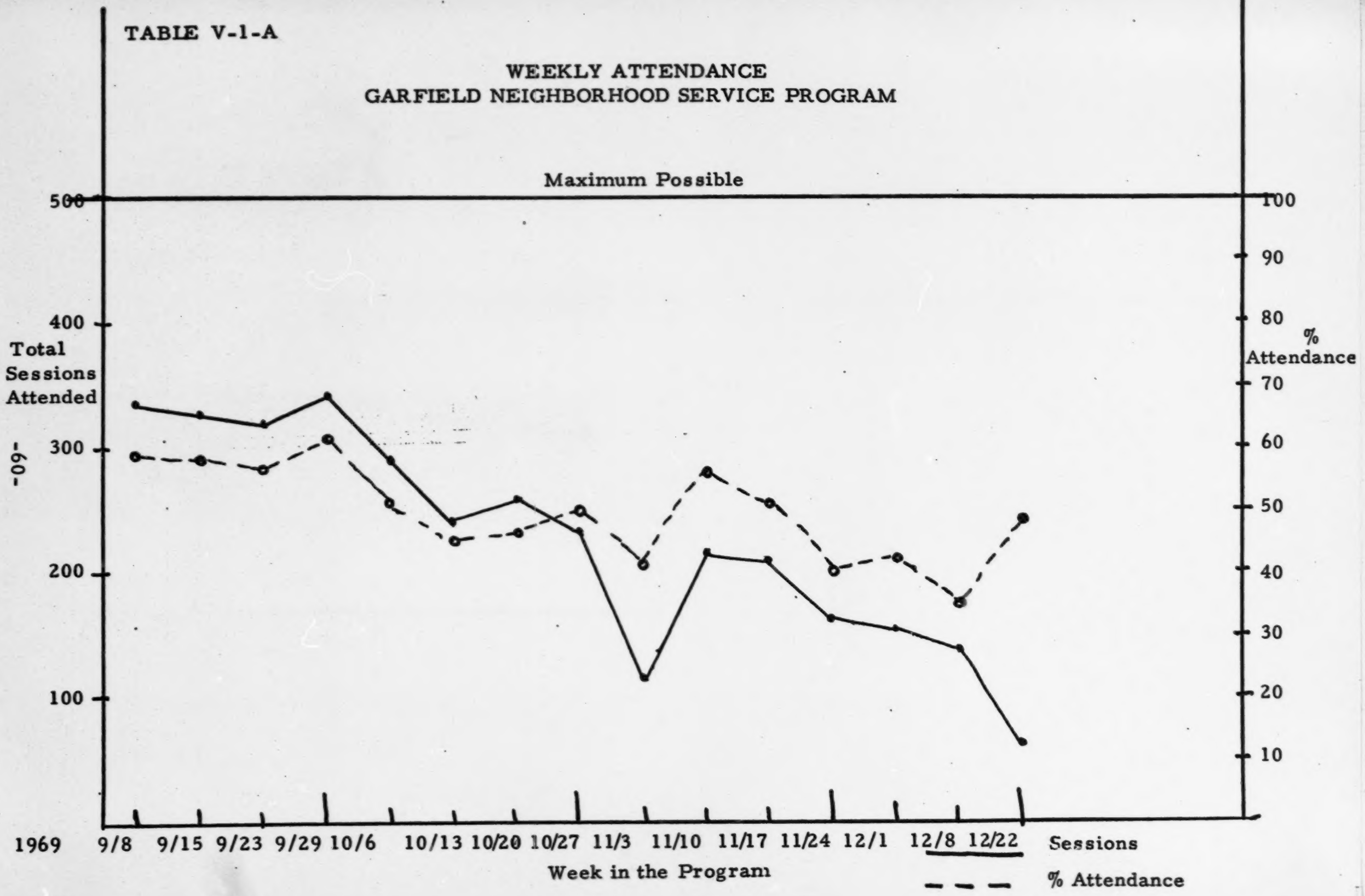


TABLE V-1-A

WEEKLY ATTENDANCE
GARFIELD NEIGHBORHOOD SERVICE PROGRAM

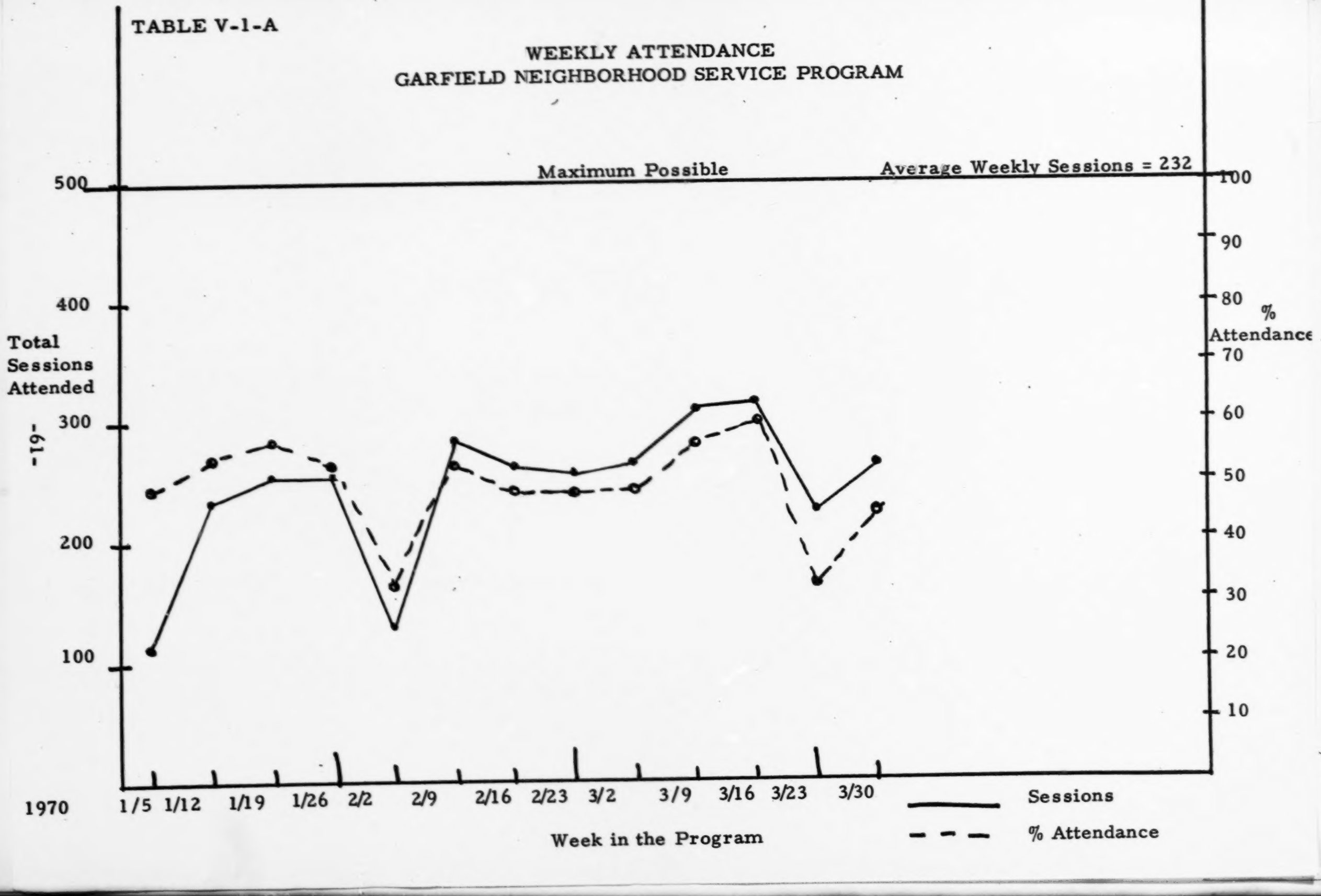


TABLE V-1-B

WEEKLY ATTENDANCE
MONTROSE URBAN PROGRESS CENTER

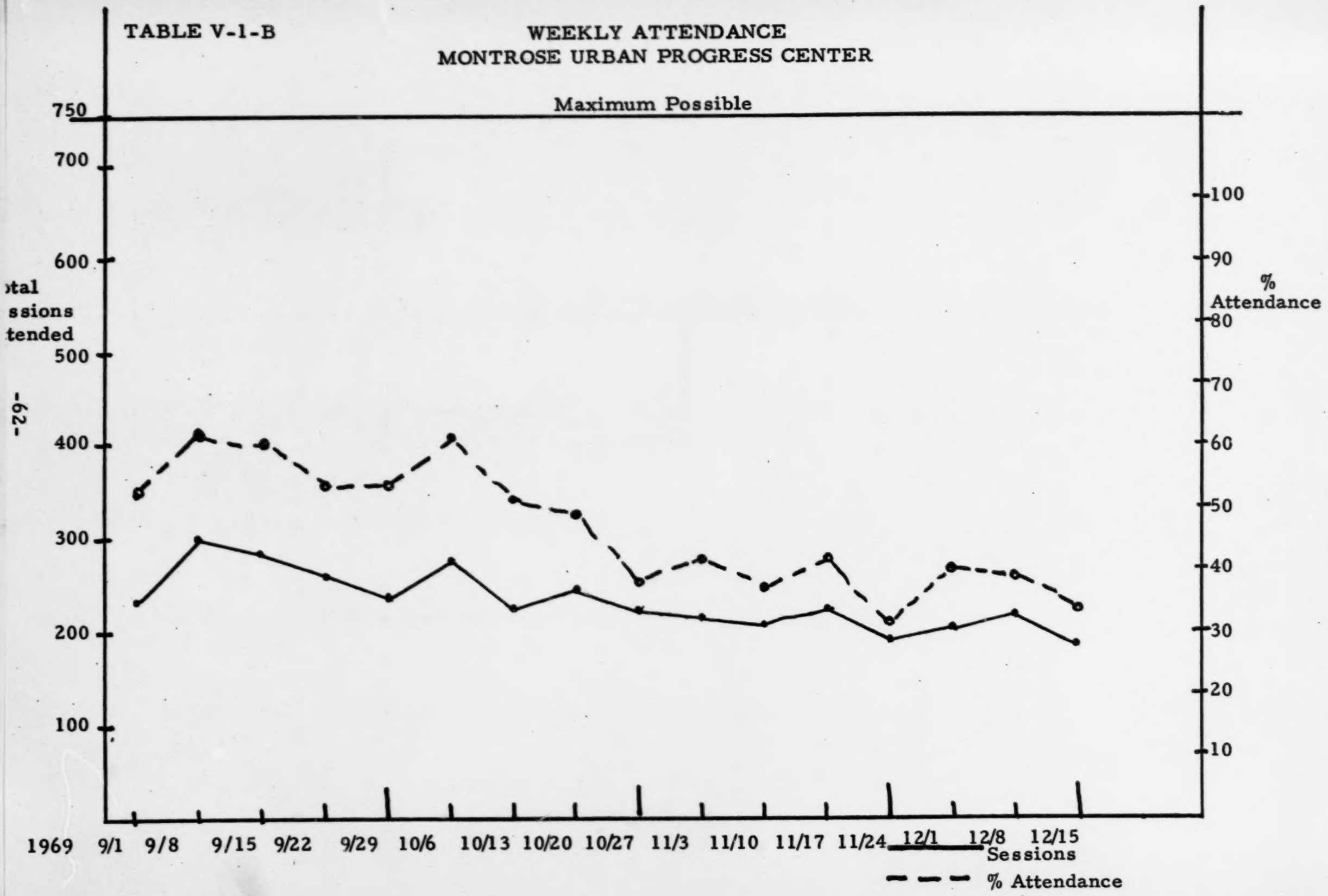


TABLE V-1-B

WEEKLY ATTENDANCE
MONTROSE URBAN PROGRESS CENTER

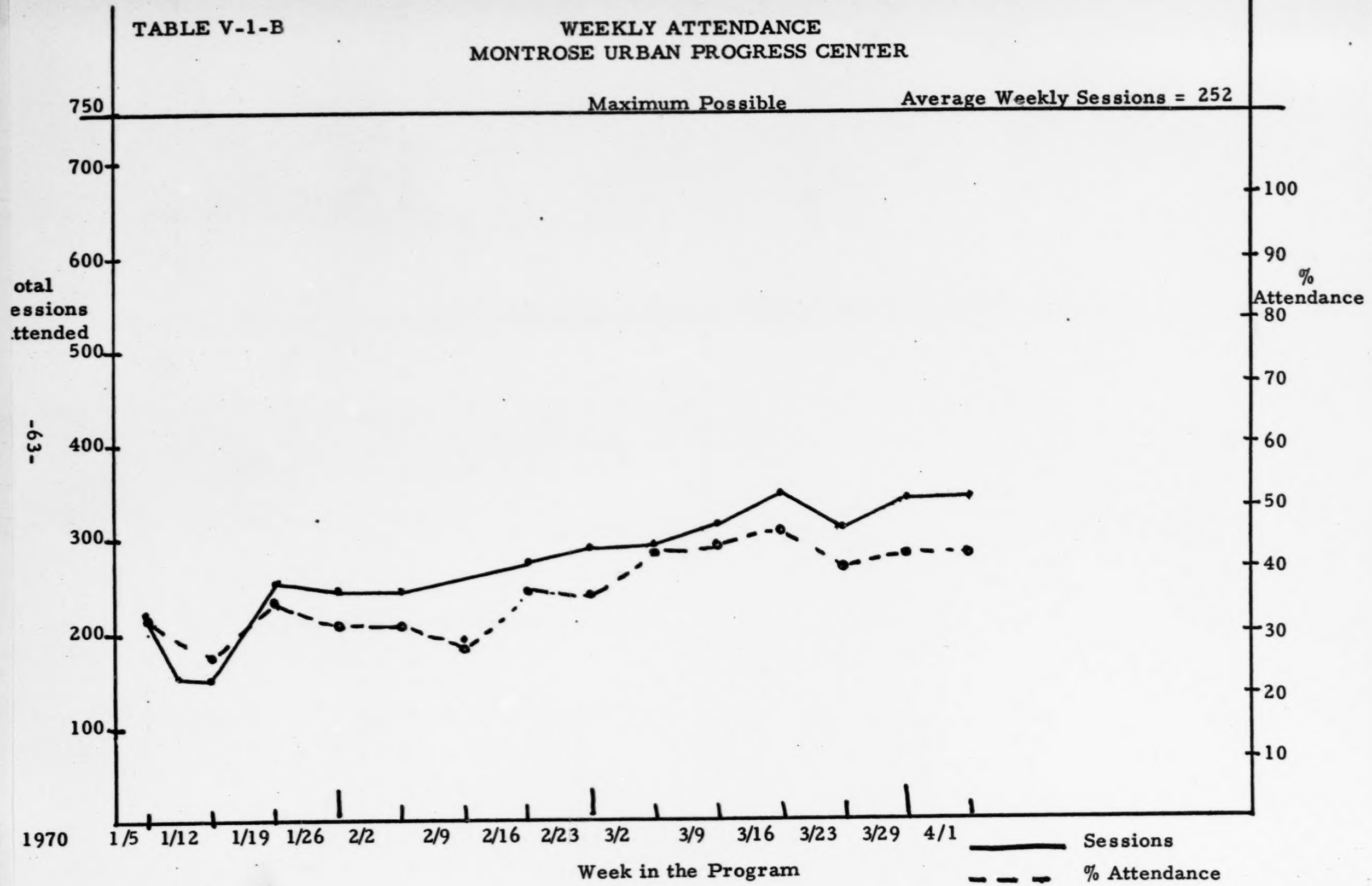


TABLE V-1-C

WEEKLY ATTENDANCE
LAWNDALE URBAN PROGRESS CENTER

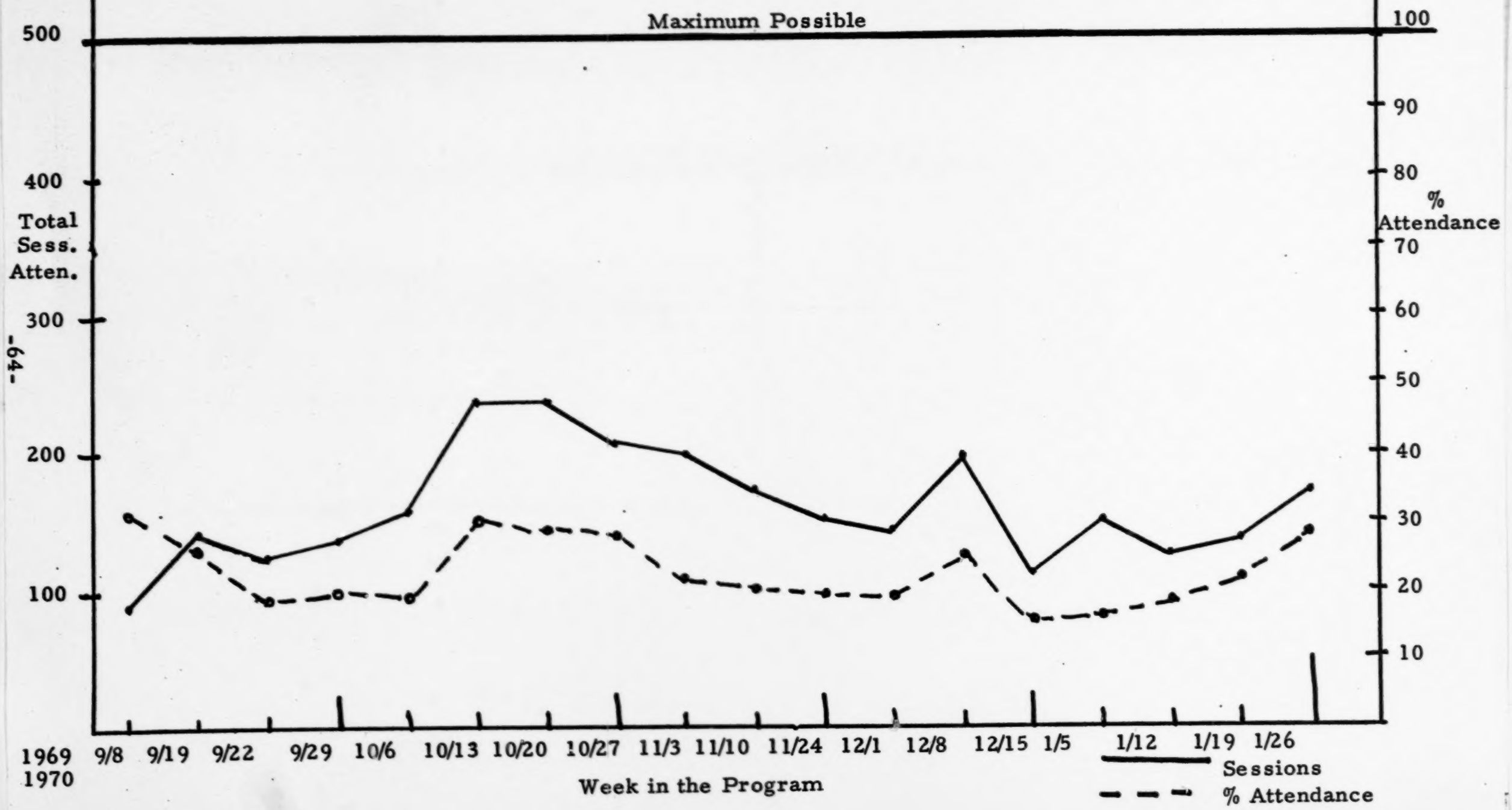
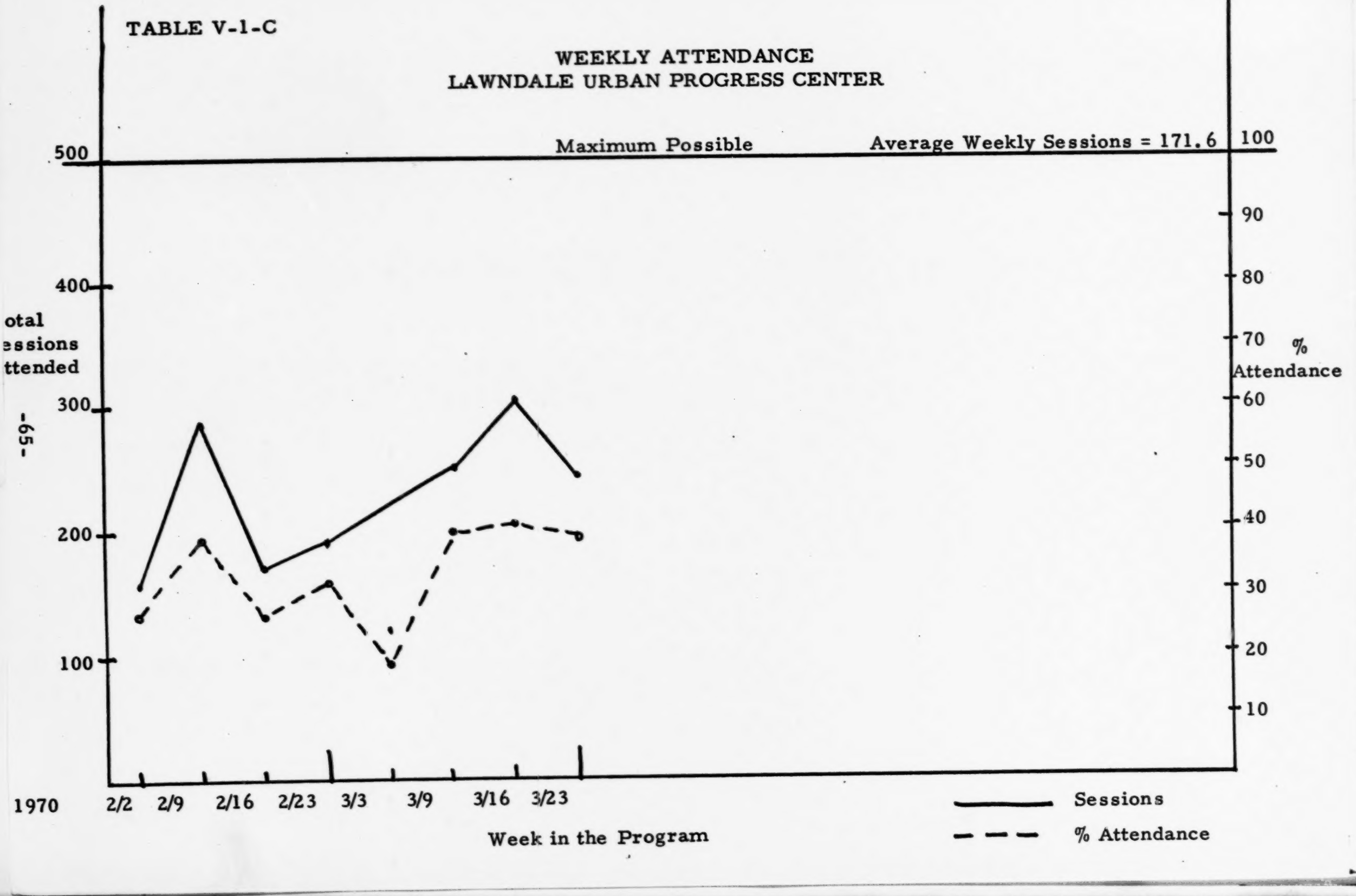


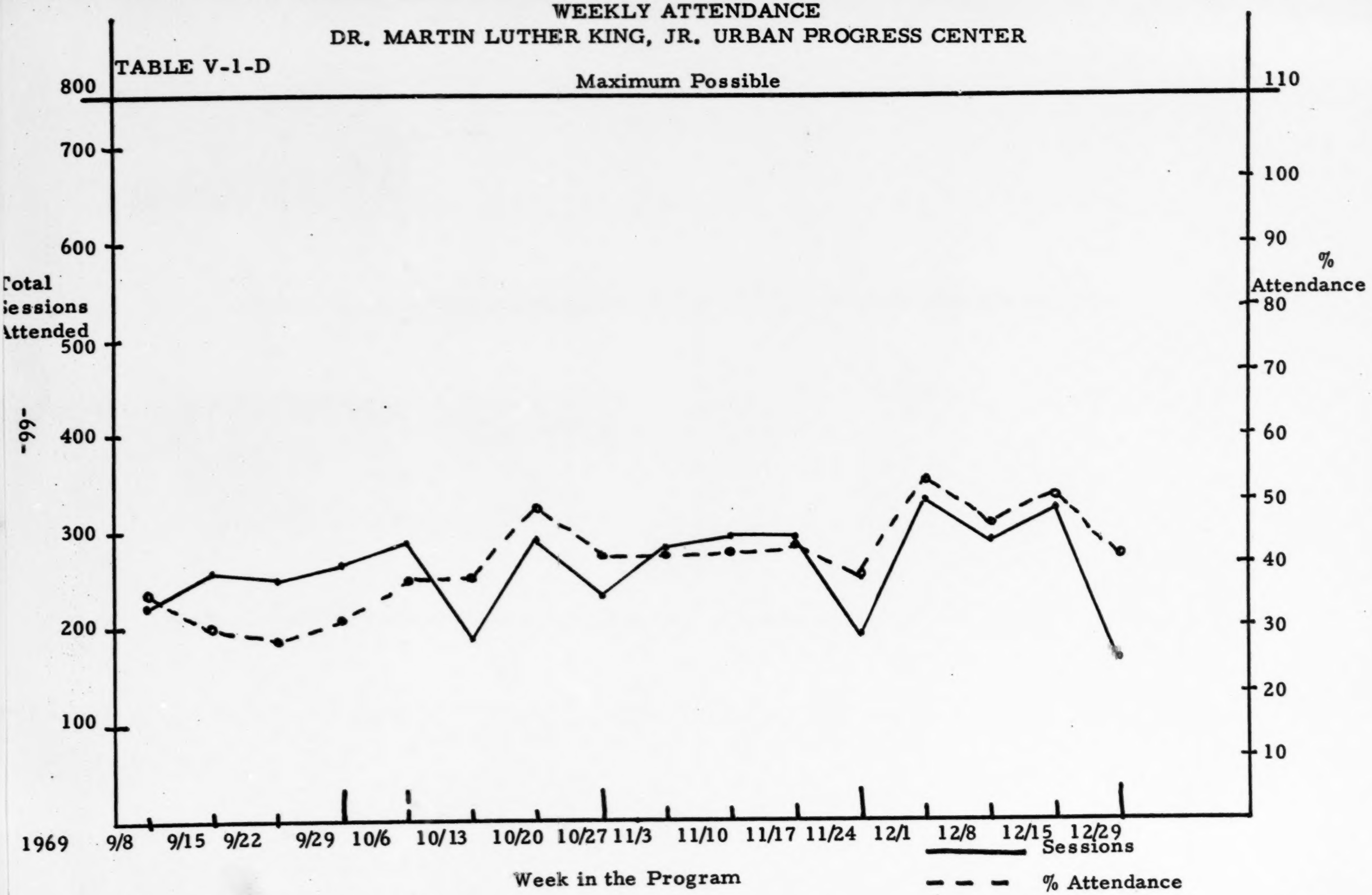
TABLE V-1-C

WEEKLY ATTENDANCE
LAWNDALE URBAN PROGRESS CENTER



WEEKLY ATTENDANCE
DR. MARTIN LUTHER KING, JR. URBAN PROGRESS CENTER

TABLE V-1-D



WEEKLY ATTENDANCE
DR. MARTIN LUTHER KING, JR. URBAN PROGRESS CENTER

TABLE V-1-D, page 2

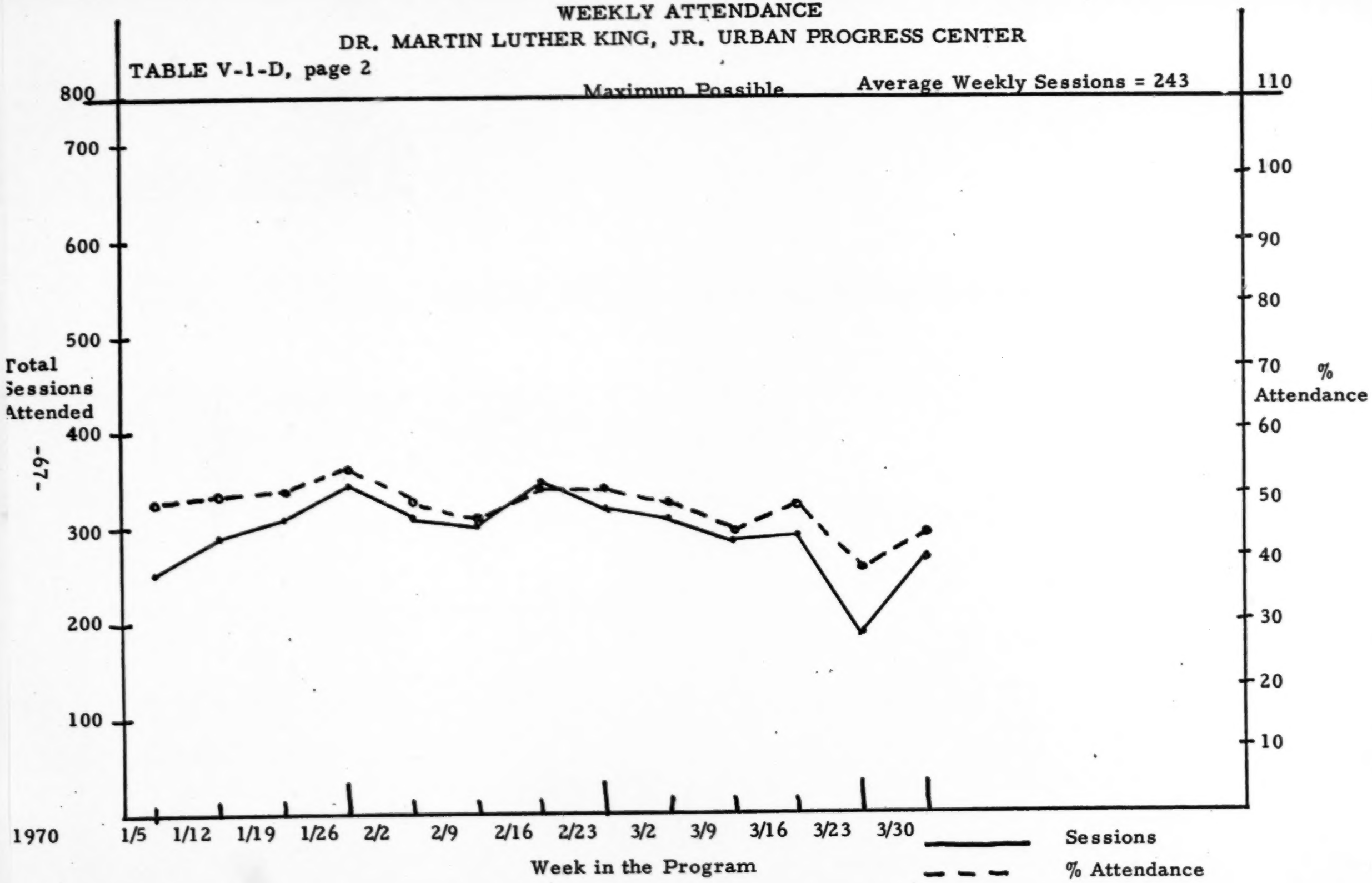


TABLE V-2

MULTIVARIATE ANALYSIS OF COVARIANCE OF THE PERFORMANCE OF VARIOUS WORDPOWER GROUPS

Criterion Variables: Word Recognition Post-Test (S. A. T.), Paragraph Meaning Post-Test (S. A. T.), and Sullivan Book Level.

Covariables: Word Recognition Pretest, Paragraph Meaning Pretest, Sullivan Placement Level, and Hours in the Program.

TABLE V-2-A - Sex Differences, Means

	Word Recognition Post-test	Paragraph Meaning Post-test	Sullivan Post-test
Female means	3.775	3.300	7.167
Male means	4.815	4.462	7.491
Adjusted contrasts (males-females)	.237	.269	.257
Univariate F's (1,59)	2.369	3.293*	.698

Multivariate F (3,57) = 1.443

TABLE V-2-B - Wage Earners vs. Non-Wage Earners

	Word Recognition Post-test	Paragraph Meaning Post-test	Sullivan Post-test
Non-wage earners, means	3.862	3.464	6.718
Wage earners, means	4.145	3.581	6.310
Adjusted contrasts (wage-non wage)	.107	.06	-.172
Univariate F's (1.75)	1.024	.305	.430

Multivariate F (3,73) = .491

* $p < .05$

** $p < .01$

TABLE V-2

TABLE V-2-C - Referral

	Word Recognition Post-test	Paragraph Meaning Post-test	Sullivan Post-test
Self referral means	4.070	3.530	6.400
Other referral means	2,947	2.782	6.000
Adjusted Contrasts (self-others)	.226	.016	- .162
Univariate F's (1,51)	3.320*	.015	.235
Multivariate F (3,49) = 1.433			

TABLE V-2-D - Barriers to Attendance

	Word Recognition Post-test	Paragraph Meaning Post-test	Sullivan Post-test
No barriers, means	3.769	3.288	6.510
Barriers, means	4.244	3.700	6.438
Adjusted contrasts (no barriers vs. barriers)	.028	.006	.309
Univariate F's (1,59)	.039	.002	.876
Multivariate F (3,57) = .332			

TABLE V-2-E - Labor Status

	Word Recognition Post-test	Paragraph Meaning Post-test	Sullivan Post-test
Unemployed, means	4.137	3.778	6.656
Employed means	3.731	2.990	6.586
Adjusted contrasts (employed-unemployed)	.363	.088	-.248
Univariate F's (1,55)	.556	1.186	.569
Multivariate F (2,53) = .610			

* $p < .05$

** $p < .01$

TABLE V-3

Student Reading Achievement

Variable	Pretest Mean	Post-test Mean	Mean Gain
Word Recognition (SAT)	3.111	4.093	.982
Paragraph Meaning (SAT)	2.731	3.681	.951
Mean Hours in the Program	26.316		
Hours per two grade level improvement (SAT)			
Word Recognition	53.6 hours		
Paragraph Meaning	55.3 hours		
Average	54.4 hours		
Hours per two grade level improvement (Sullivan Placement)	29.8 hours		
Hours per two grade level progress (Sullivan Program)	25.1 hours		

* $p < .05$

** $p < .01$